

Title (en)

SEMI-AUTOMATIC IMAGE SEGMENTATION

Title (de)

HALBAUTOMATISCHE BILDSEGMENTIERUNG

Title (fr)

SEGMENTATION D'IMAGE SEMI-AUTOMATIQUE

Publication

**EP 3332356 A4 20190320 (EN)**

Application

**EP 16828308 A 20160715**

Priority

- US 201514804433 A 20150721
- US 2016042510 W 20160715

Abstract (en)

[origin: US9443316B1] Semi-automatic (instant) color image segmentation is performed on an input image for an object located near the point given by the user (e.g., touch screen contact). The size, shape, and the number of colors of the target object which is about (lying around or surrounding) the user-selected point is determined, and determinations made for which region the pixels belong to, either foreground or background. A binary object mask is generated which can be utilized for removing the material surrounding that object, or inverting the mask to remove the material of the object.

IPC 8 full level

**G06T 7/11** (2017.01); **G06T 7/143** (2017.01); **G06T 7/194** (2017.01); **G06V 10/764** (2022.01)

CPC (source: EP KR US)

**G06F 3/04842** (2013.01 - KR US); **G06F 18/24155** (2023.01 - EP KR US); **G06F 18/40** (2023.01 - KR US); **G06T 7/11** (2016.12 - EP KR US); **G06T 7/143** (2016.12 - EP KR US); **G06T 7/194** (2016.12 - EP KR US); **G06V 10/764** (2022.01 - EP KR US); **G06V 10/945** (2022.01 - EP KR US); **G06V 30/2504** (2022.01 - KR US); **G06V 40/162** (2022.01 - EP KR US); **G06T 2207/10024** (2013.01 - EP KR US); **G06T 2207/20016** (2013.01 - EP KR US); **G06T 2207/20076** (2013.01 - EP KR US); **G06T 2207/20101** (2013.01 - EP KR US); **G06T 2207/30201** (2013.01 - EP KR US); **G06T 2207/30232** (2013.01 - EP KR US)

Citation (search report)

- [XAI] MIKHAIL SINDEYEV ET AL: "A novel interactive image matting framework", 1 January 2008 (2008-01-01), pages 1 - 4, XP055553547, Retrieved from the Internet <URL:[https://www.researchgate.net/profile/Vadim\\_Konushin/publication/228939522\\_A\\_novel\\_interactive\\_image\\_matting\\_framework/links/00b495254fe51b3f5600000.pdf](https://www.researchgate.net/profile/Vadim_Konushin/publication/228939522_A_novel_interactive_image_matting_framework/links/00b495254fe51b3f5600000.pdf)> [retrieved on 20190207], DOI: 10.1007/s00371-005-0335-x
- [XAI] YRJ HME ET AL: "Semi-automatic liver tumor segmentation with hidden Markov measure field model and non-parametric distribution estimation", MEDICAL IMAGE ANALYSIS, OXFORD UNIVERSITY PRESS, OXFORD, GB, vol. 16, no. 1, 16 June 2011 (2011-06-16), pages 140 - 149, XP028124527, ISSN: 1361-8415, [retrieved on 20110624], DOI: 10.1016/J.MEDIA.2011.06.006
- [I] MIKHAIL SINDEYEV ET AL: "Improvements of Bayesian Matting", PROC. OF GRAPHICON, 1 June 2007 (2007-06-01), San Francisco, pages 88 - 95, XP055553230, Retrieved from the Internet <URL:[https://www.researchgate.net/profile/Vadim\\_Konushin/publication/228373658\\_Improvements\\_of\\_Bayesian\\_Matting/links/00b495254fe51e226e000000/Improvements-of-Bayesian-Matting.pdf](https://www.researchgate.net/profile/Vadim_Konushin/publication/228373658_Improvements_of_Bayesian_Matting/links/00b495254fe51e226e000000/Improvements-of-Bayesian-Matting.pdf)> [retrieved on 20190207]
- [I] M. FREIMAN ET AL: "An iterative Bayesian approach for nearly automatic liver segmentation: algorithm and validation", INTERNATIONAL JOURNAL OF COMPUTER ASSISTED RADIOLOGY AND SURGERY, vol. 3, no. 5, 23 July 2008 (2008-07-23), DE, pages 439 - 446, XP055553238, ISSN: 1861-6410, DOI: 10.1007/s11548-008-0254-1
- See references of WO 2017015117A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

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DOCDB simple family (application)

**US 201514804433 A 20150721**; CN 201680039591 A 20160715; EP 16828308 A 20160715; JP 2018500651 A 20160715; KR 20187000532 A 20160715; US 2016042510 W 20160715